

CLAIMS

1. Decoding method of a picture sequence coded with spatial and
5 temporal scalability, the coded data comprising motion information, comprising
a hierarchical temporal synthesis step (16) carrying out a motion compensated
temporal filtering, or MCTF, of pictures at a frequency decomposition level, from
the said motion information, to provide pictures at a lower decomposition level,
characterized in that, during a motion compensated temporal filtering operation,
10 the resolution chosen for the use of the motion information and the complexity
of the interpolation filters used depend on a decoding scenario, namely spatial
and temporal resolutions and the bit-rate selected for the decoding or else the
corresponding temporal decomposition level or a combination of these
parameters.
- 15 2. Method according to claim 1, characterized in that the number
of coefficients of the interpolation filter (16) used for the motion compensation
depends on the decoding scenario or the temporal decomposition level.
- 20 3. Method according to claim 1, characterized in that the
hierarchical temporal synthesis step (16) is a decoding of wavelet coefficients
with motion compensated filtering.
- 25 4. Coding method of a picture sequence of a given spatial
resolution, with spatial and temporal scalability, comprising a hierarchical
temporal analysis step (4) carrying out a motion compensated temporal filtering,
or MCTF, of pictures at a frequency decomposition level, from motion
information between these pictures (7), to provide pictures at a higher
decomposition level, characterized in that, during a motion compensated
30 temporal filtering operation (4), the resolution chosen for the use of the said
motion information and the complexity of the interpolation filters used (9)
depends upon the said spatial resolution of the source pictures or the
corresponding temporal decomposition level.
- 35 5. Method according to claim 4, characterized in that it comprises
a step of motion estimation (7) computed between two pictures at a given level
of decomposition to perform the motion compensation (4) and in that the

computation accuracy of the motion estimation (7) depends on the temporal decomposition level or the said spatial resolution of the source pictures.

6. Method according to claim 4, characterized in that the
5 hierarchical temporal analysis step (4) is a wavelet coding with motion compensated filtering.

7. Decoder for the implementation of the method according to
claim 1, characterized in that it comprises a motion configuration choice circuit
10 (16) to determine the motion resolution and the interpolation filter to use in the motion compensation (16) for the motion compensated filtering, depending on the decoding scenario, namely the spatial and temporal resolutions and the bit-rate selected for the decoding or the corresponding temporal decomposition level or a combination of these parameters.

15 8. Coder for the implementation of the method according to
claim 4, characterized in that it comprises a motion configuration choice circuit
(4) to determine the interpolation filter to be used by the temporal analysis circuit for the motion compensation (4) depending on the said spatial resolution
20 of the source pictures or the corresponding temporal decomposition level.

9. Coder for the implementation of the method according to
claim 4, characterized in that it comprises a motion configuration choice circuit (7) to determine the accuracy of the motion computed by the motion
25 estimation circuit (7) depending on the said spatial resolution of the source pictures or of the corresponding temporal decomposition level.